

Systems That Save



ATI Systems

**Community Warning and Homeland
Security Systems**





Community Warning and Homeland Security Systems

COMPANY PROFILE

ATI Systems designs, manufactures and installs mass notification systems for communities worldwide. Incorporated in Massachusetts in 1981, ATI Systems developed an innovative wireless system that provides audible and visual warning through a simple and compact hardware design, user-friendly software and the latest advances in communication methods including radio frequency, IP Ethernet, cellular and satellite technology.

ATI's comprehensive services provide a complete turnkey solution through a single point of contact. Field-proven acoustic modeling and design affords proper sound coverage and superior voice intelligibility in both indoor and/or outdoor areas. Our in-house engineering and manufacturing teams deliver a flexible and integrated state-of-the-art warning system that meets the specific needs and requirements of the community. The ATI Mass Notification System provides a fast and effective means of notification during any man-made or natural emergency situation, or security threat affecting the community.

COMPLETE SYSTEM APPROACH

- Comprehensive acoustic analysis and modeling
- Indoor and/or outdoor alerting equipment
- In-house engineering, project management and system design staff
- Multi-layered notification capabilities via audio, visual, telephone, and network alerting
- System and equipment QA testing
- Construction supervision and system installation
- Startup and commissioning by a factory-trained system specialist
- System operator training
- Long term service & maintenance contracts

Featured Clients



World Trade Center
New York



Hudson County
New Jersey



City of San Francisco
California

ATI Systems

About Us

Acoustic Technology, Inc. (ATI Systems) designs, manufactures and installs reliable emergency warning and notification systems for the Campus, Community, Industrial and Military markets. Incorporated in Massachusetts in 1981, ATI Systems developed an innovative wireless system that provides audible and visual warnings via a simple and compact hardware design, user-friendly software and the latest advances in communication methods, including radio frequency, IP Ethernet and satellite technology. Through acoustic design and modeling, ATI Systems provides proper sound coverage and superior voice intelligibility in both outdoor and indoor areas to ensure the safety of communities worldwide. To learn more about ATI Systems, visit www.atisystem.com.

Key Markets:

CAMPUS – College campuses need to be prepared for any severe weather or emergency situation affecting their communities. The ATI warning system is the only tried and true solution for reaching everyone immediately by providing an integrated, multi-layered notification system.

COMMUNITY – Compliant with FEMA regulations, ATI notification systems allow communities to get the right message out immediately and clearly in the case of severe weather, homeland security threats or man-made disasters.

INDUSTRIAL – Ideal for high noise environments, the ATI system is designed for plant-wide alerting in case of emergencies. From accidents to chemical spills, the system provides audible and visual warnings through indoor and outdoor speaker systems, strobe lights and LED signage.

MILITARY – ATI Systems provides complete, integrated warning systems for the military including Giant Voice capabilities both outdoors and inside of base buildings. The mass notification system delivers clear and intelligible tone and voice commands in mission-critical situations.



Why Choose ATI Systems

Expertise: We rely on our expertise in acoustic design to effectively position our system in the field. We offer a full analysis of existing emergency systems, a prediction of background noise levels and other factors that could influence sound propagation, a determination of acoustic requirements for performance, and new designs for full acoustic coverage to ensure the reliability and effectiveness of our system.

Direct Link to Manufacturer: We manufacture our own products in our Boston, Massachusetts, USA headquarters and are able to customize each system with a broad range of communication and control capabilities. Our expertise in redundant system design, wireless communication, backup power systems, existing system integration and diagnostic monitoring produces a reliable, field-tested final product.

Flexibility: We recognize that in an emergency, multiple methods of notification can save lives. We can seamlessly integrate with other existing notification systems, including emergency text messages, telephone alerts, email and desktop alerts.

Reputation: For over 20 years, ATI Systems has been known for its reliability and quality assurance, its industry-leading voice intelligibility and message storage ability, and its competitive pricing. Notable clients include North Carolina State University, Washington State University, the Port Authority of New York and New Jersey, the City of San Francisco, the Chevron Products Refinery, Indian Point Energy Center, Eglin Air Force Base and Groton Naval Base.

Simplicity: Our ATI Equipment modular design is easy to use, operate and maintain which will provide the customer with great saving during the life expectancy of the system.

Expandability: ATI builds the system with the future in mind. The system is a modular design and the software is expandable and can be changed by the end user to accommodate more equipment into the system.

Compliance: ATI equipment is built to meet the applicable government requirements and industry standards in a cost effective manner.

Communication: ATI Systems are designed to utilize the existing radio network infrastructure. We interface to an unlimited numbers of radio systems, conventional and trunked, from many manufacturers such as Motorola, TAIT, Ericsson/GE, etc... Also, ATI uses several methods for digital communication such as Ethernet, Fiber Optics, Cellular modems, Wireless mesh, Microwave and Satellite.



All information and specifications are subject to change without notice, and may contain typographical or other errors.

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06/09

Community and Homeland Security Systems

ATI offers one of the most reliable, cost-effective and compact designs in the industry, and delivers a flexible siren system that provides voice and tone services. We have a dynamic team of skilled designers, engineers and technicians to set up systems especially geared towards your requirements. Our early warning systems are utilized by communities and Homeland Security to ensure public safety.

Recognized in the marketplace for our expertise in acoustic design and GIS and industry leadership, the ATI HPSS siren delivers a unique solution combining high power output, to provide long-range coverage and advanced speaker technology to provide superior voice broadcasts with the industry's best speech intelligibility.

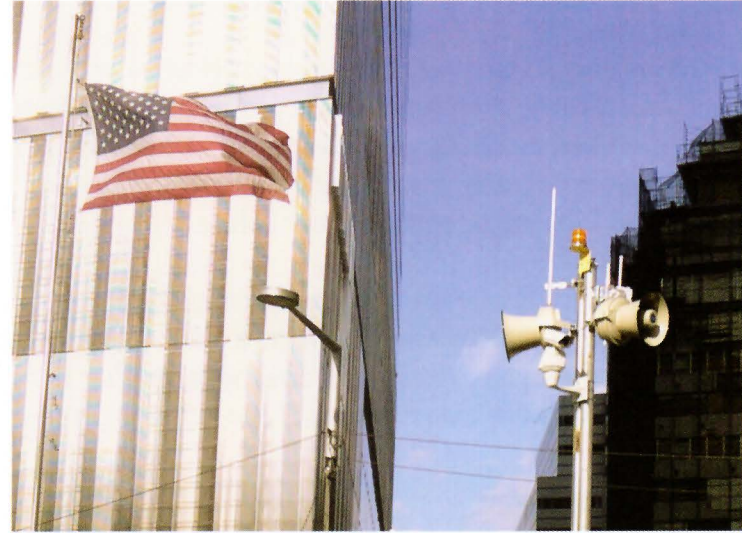
ATI Advantages

- In-house manufacturing and engineering all of our system devices, system firmware and software, to offer the highest quality equipment at competitive prices.
- Directional sirens that provide for outstanding clear and intelligible voice coverage that cannot be replicated through the use of non-directional speakers.
- Compact, high-efficiency Class D Amplifiers requiring less power to produce high sound output providing clear, high-fidelity messages, tones, music, and live voice.
- Easy-to-use graphical software for quick, straightforward operation in an emergency.
- Systems that are easily scalable and expandable for future capabilities.
- Durable, rugged hardware and conformal-coated electronics to prevent damage in harsh environments.
- Constant system supervision through component-to-component communication and automated self-diagnostics.
- Encrypted and synchronized Frequency Shift Keying (FSK) radio communication that incorporates greater security than typical Dual Tone Multi-Frequency (DTMF) radio communication. However, ATI can also provide a DTMF option as required. Also, an HPSS can be provided utilizing both FSK and DTMF.
- Systems designed for integration with existing or other types of notification systems and devices, such as telephone alerting, network alerting, indoor public address, etc..., for critical and efficient one-touch notification.
- Expertise in customized system design and operation and the only manufacturer to provide total customization from the ground up.



For close to thirty years ATI has been providing warning systems to communities, industrial plants, campuses and military bases. Our systems have been deployed worldwide in various weather conditions and temperatures.

Recently ATI designed and installed an extensive warning system to protect the large community within the EPZ of the Indian Point Nuclear Power plant. The system provides tone warning and clear intelligible voice instruction over four counties, including a large hiking park and tourist facility. Including one hundred and seventy-two HPSS 3200 Watt sirens, eleven control stations and four simulcast communication repeater towers. It is the first system in the United States to use redundant communication repeater towers. The system uses regular VHF mobile radios in addition to cellular modems to communicate between its components.



In addition, ATI is proud to announce the award of the emergency warning system contract for the World Trade Center, New York. ATI is providing the warning system during the construction of the new World Trade Center Towers.

Communication Methods

ATI has extensive experience interfacing our sirens to a wide variety of communication and control equipment.

Analog options include:

- VHF/UHF radios (either trunked or conventional) 800/900 MHZ frequencies with transmit power up to 25 watts
- Telephone or twisted pair for hardwired applications
- ATI uses FSK as the main protocol between sirens and our own controllers because it is relatively fast, very robust and can be made very secure using encryption
- A variety of older DTMF and two-tone sequential signaling protocols can also be supported in parallel with the FSK modem

RS232 and Ethernet ports on our units support a number of digital communication options:

- Wired Ethernet
- Fiber Optic links
- Cellular modem
- Wireless mesh
- Microwave
- Satellite modem
- Motorola / MOSCAD or other SCADA systems

ATI equipment can provide or accept a number of dry contact closures to signal different system activations or events.

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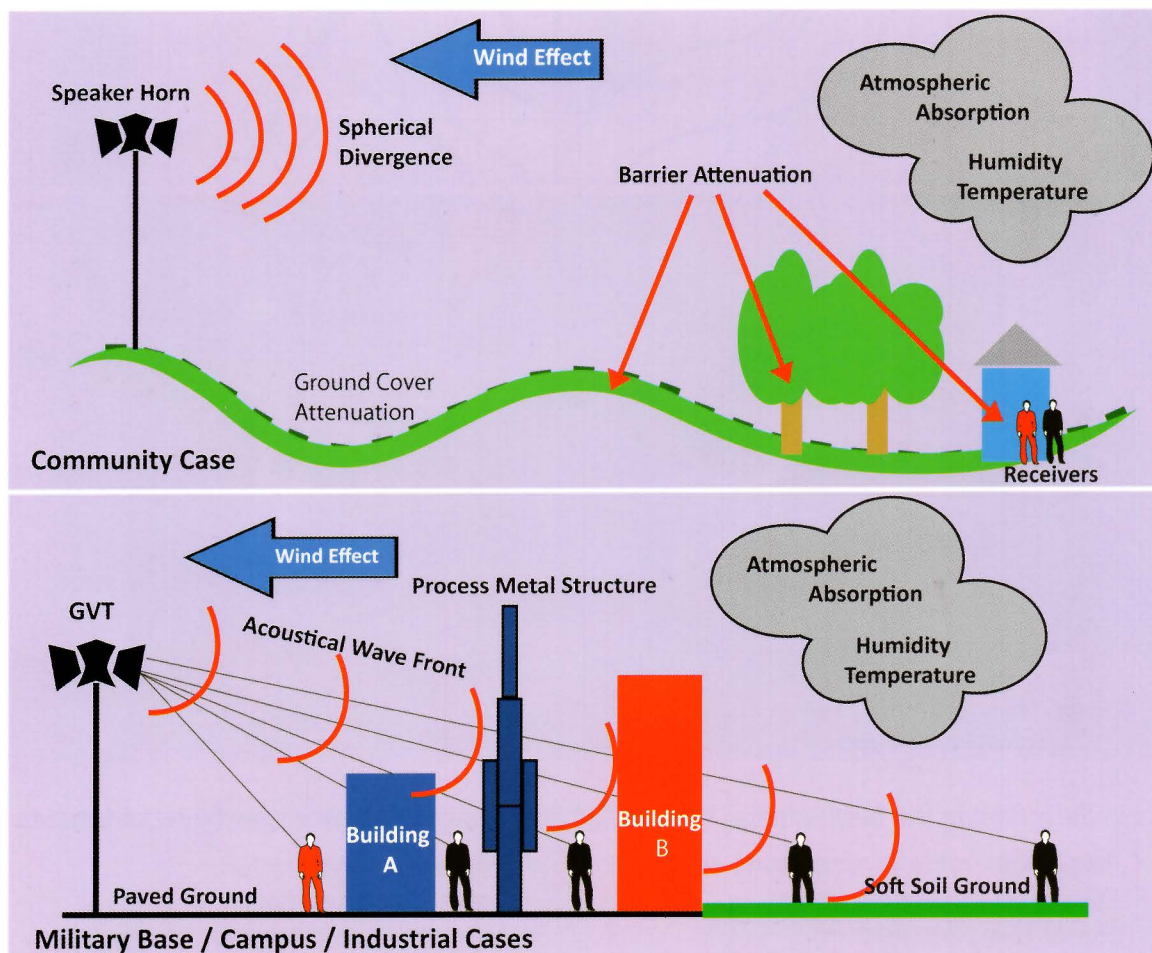
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Acoustic Design and Modeling

Acoustic Technology, Inc. (ATI) has been designing siren systems for more than 25 years, utilizing the state-of-the-art methodology to predict sound from a siren system. ATI can conduct a comprehensive acoustic analysis to evaluate the voice and tone coverage of a facility or large community, develop the recommended siren layout design and provide the resulting acoustic coverage mapping.

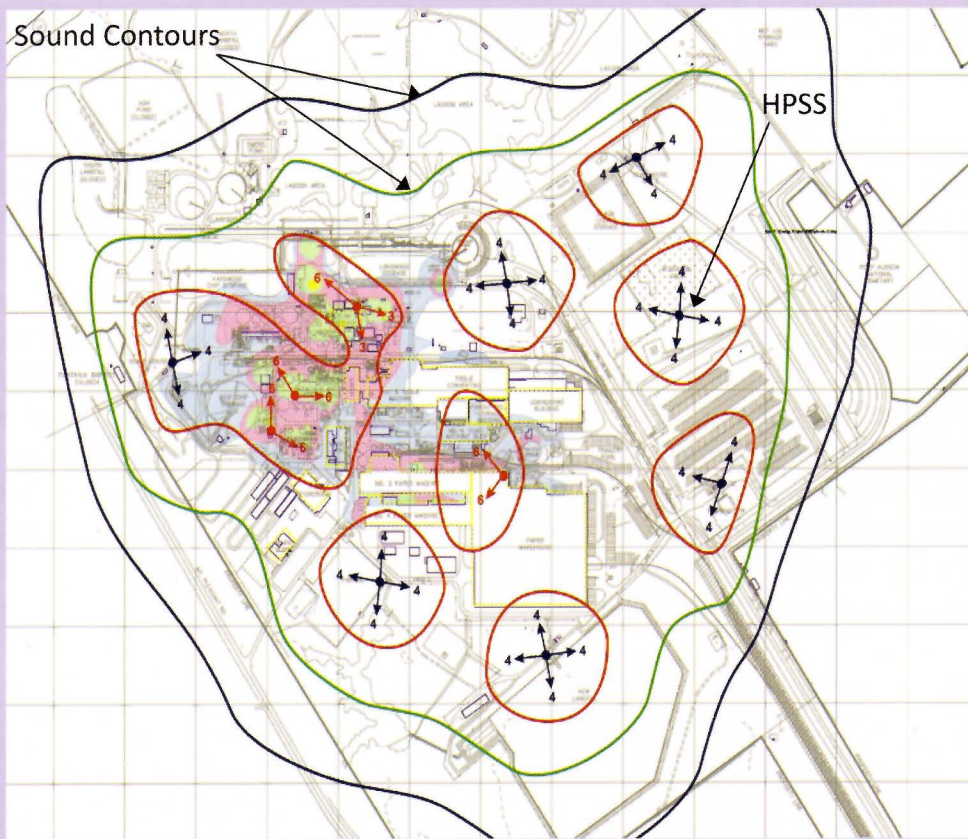
The acoustic model utilizes the specific characteristics of the loudspeakers, including power and directivity, together with typical voice frequency characteristics. GIS mapping of various layers are used to determine elevation heights of sound obstructions such as hills, mountains, high buildings, etc. For communities, sound obstructions can be mainly obtained from GIS data. For special facilities such as a military base or a campus, ATI utilizes various techniques to obtain structural heights. A three-dimensional model of the actual facility and speaker locations is used to predict and diagnose sound propagation, accounting for topographical features, buildings structures, ground and terrain effects, atmospheric effects, and geometrical spreading, and includes diffracted, direct and reflected sound paths. By examining the individual contributions and reflections from each speaker location, multiple arrival effects and shadow regions can be identified to assist with speaker orientation and placement, in order to achieve optimal intelligibility and coverage.



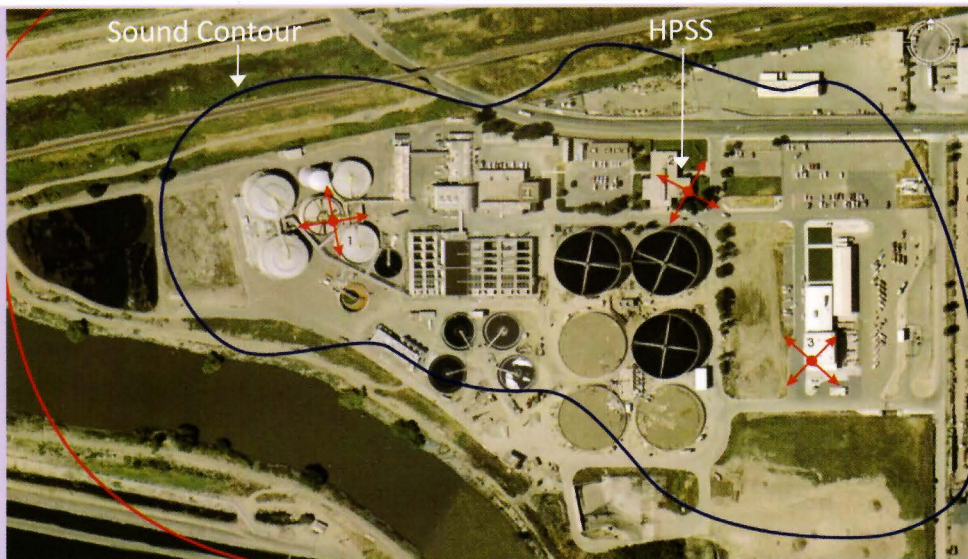
ATI is the only vendor with an expert design staff in both acoustics and GIS analysis. Our proprietary acoustic model takes into account the following factors:

- Topography
- Building Attenuation
- Reflection and Diffraction
- Ground Attenuation
- Atmospheric Absorption
- Spherical Spreading
- Weather Conditions

Military Application



Industrial Application



Key factors in determining the best solution for intelligibility analysis and user specific requirements :

- Intelligible voice vs. siren tone coverage
- Effects on intelligible voice
- Signal-to-noise ratio
- Audible device characteristics
- Sound reflection (echoes)
- Effect of reverberation
- Voice characteristics
- Listener characteristics
- Speaker-to-listener distance

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Control Station

The Control Station (CS) provides a centralized location for activating, controlling and monitoring all system equipment. The CS also has the ability to broadcast live public address, pre-recorded messages and siren tones. Each CS consists of a PC with the ATI Systems' Windows-based software and the REACT 4000 Communication Control Unit (CCU). The software provides an extremely user-friendly, graphics-based interface to display a detailed map of the county, facility, base or campus with color-coded icons to visually indicate the location and status of the sirens and remote units.

Standard Equipment

- Central Control Unit
- Microprocessor controller
- Conventional VHF or UHF radio
- Front panel control
- LCD display
- Internal power supply
- Antenna connector
- Hand-held microphone for live PA broadcasts
- Desktop computer station
- ATI Systems' customized software



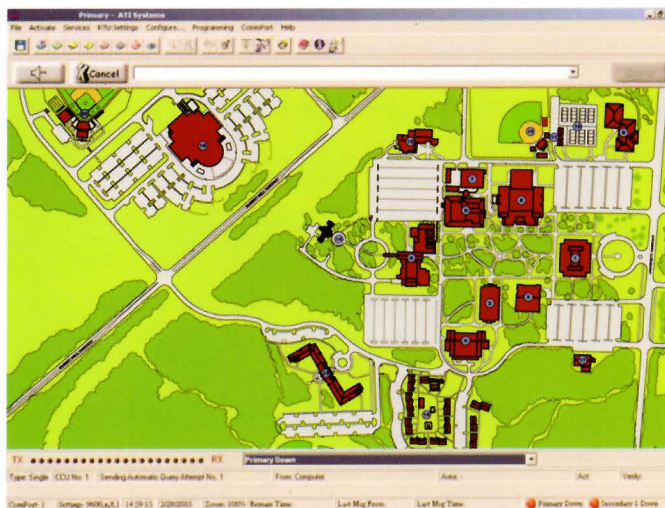
Optional Features

ATI Systems offers fully customizable solutions, including the following features:

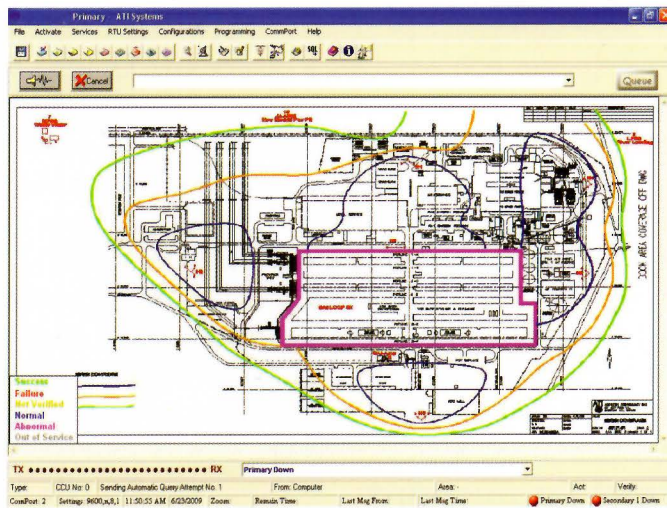
- Touch screen or flat screen monitor upgrade
- Laser jet printer upgrade
- Rack mount station upgrade
- Customized maps within ATI Systems' software
- Trunked radio upgrade
- Flexible, redundant communication options including IP, Ethernet, twisted pair/phone line, cellular and satellite
- Antenna surge protector
- LED message sign or strobe light
- Interfaces to pagers, weather stations, network and telephone alerting systems

Key Features

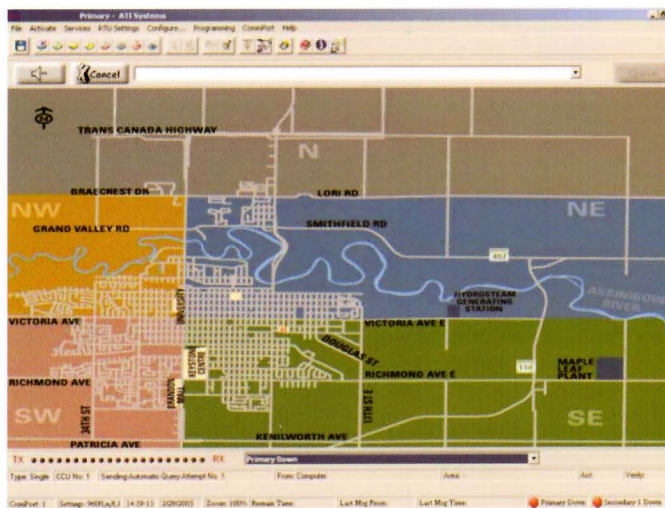
- Simple and compact design with user-friendly interface
- Minimal training required
- Manual and automatic tone alert, voice message or live PA activation, cancellation, testing and reporting of all system activities
- Manual and automatic silent testing
- Operates both outdoor and indoor alerting units
- Activates single, group or system-wide tone alerts, voice messages or live PA
- Configures the alert tone or voice message type, duration and number of cycles
- Archive and print system activity reports
- Monitors and displays unsolicited alert messages from remote sites
- Standard VHF or UHF radio receives and transmits FSK data signals
- Message encryption and security coding prevent unauthorized system activations
- Supervises communication with additional CCUs for redundant activation points



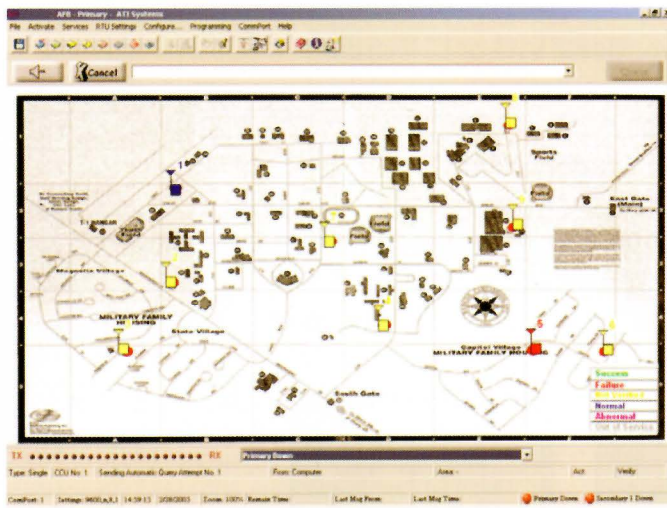
Campus Software Screenshot



Industrial Software Screenshot



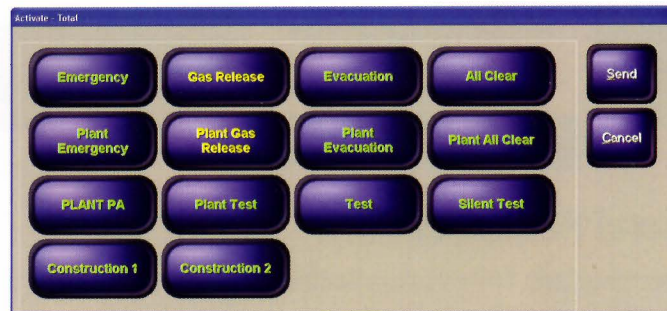
Community Software Screenshot



Military Software Screenshot



Sample Activation



Sample Activation

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Communication Control Unit

The ATI Communication Control Unit (CCU) is used to activate, monitor and control all system activities. It can be used as part of the ATI Control Station configuration or as a stand-alone unit. Initiating an activation, checking the systems status and conducting live PA broadcasts is simple through the front panel display.

Standard Equipment

- Desktop cabinet
- Microprocessor controller
- Conventional VHF or UHF radio
- Front panel controls
- LCD display
- Internal power supply and battery backup
- Antenna connector
- Hand-held microphone for live PA broadcasts



Key Features

- Simple and compact design provides a convenient, fully functional two-way stand alone unit
- Simple front panel controls allow the user to select the activation type and address (Total, Group or Individual)
- LCD display guides the user through the necessary steps to activate the system and then displays the system status
- Cancel function halts an alarm that is already in progress
- Activates tone alerting, voice messaging and live PA
- Standard VHF and UHF radio receives and transmits FSK, DTMF and Two Tone Sequential (TTS) data signals
- Monitors and displays unsolicited alert messages from remote terminal units and sirens
- Supports eight SPST relays and eight opto-coupler inputs to interface with external devices and four analog inputs
- Message encryption and security coding prevent unauthorized system activations

Optional Features

ATI Systems offers fully customizable solutions, including the following features:

- Ability to interface to a conventional or trunking radio system, base station or leased line circuit
- Multiple communication methods including Ethernet, fiber, wireless IP, twisted pair/phone line, cellular and satellite
- Antenna surge protector
- LED message sign interface
- Mobile CCU upgrade
- Supports up to eight external push buttons for one button activations

Specifications for Model # CCU

Electrical	
AC Input Voltage	120 VAC or 240 VAC 50/60 Hz
Communication	
Signaling Method	FSK, DTMF, TTS
Radio	VHF, UHF or trunk
Radio Output Power	1 to 25 Watts
Mechanical	
Size	6"H x 21"W x 16"D
Weight	35 lbs
LCD Display Size	20 characters x 4 lines
Operation	Tested and proven in harsh environments
Standard Programmable Configuration	
Alert Activation Capacity	40
Group or Zone Capacity	100
Individual Alerting Unit Capacity	1,000
Batteries	
Requires one 12VDC, 7 Amp-Hour battery	

Mobile CCU Option

The ATI Mobile Control Station provides a lightweight, portable alternative to the desktop control station.



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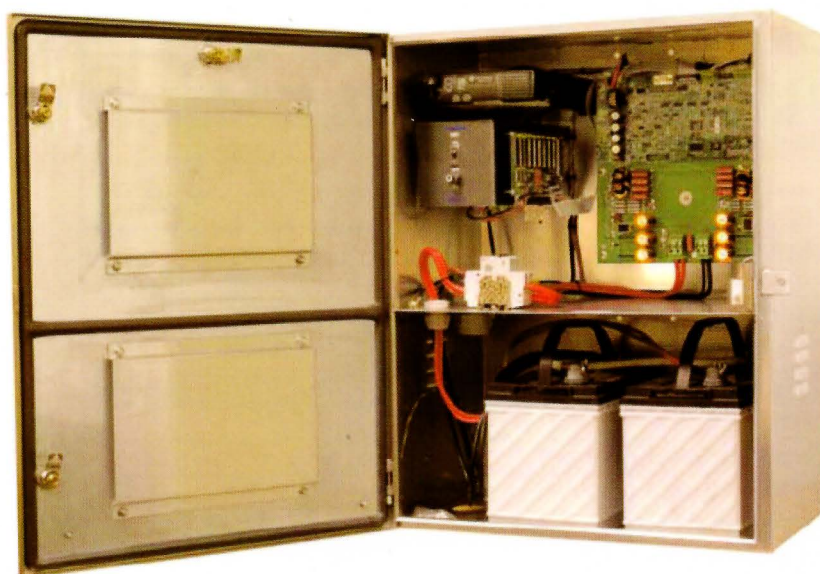
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High Powered Speaker Station

Our most popular unit, the HPSS16 provides 1600 Watts of continuous audio power for reliable outdoor alert tone notification and intelligible voice instructions in emergency situations. The ATI HPSS16 can also be utilized for live public address.

Standard Equipment

- Stainless steel enclosure with NEMA-4/3R electronic housing and NEMA-4/3R ventilated battery compartment
- Enclosure mounting bracket and mounting hardware
- Class D Amplifier integrated with a high-performance controller board
- Conventional VHF or UHF radio and mounting hardware
- Intrusion switch
- Temperature-compensated battery charger
- Power On/Off circuit breakers
- Four 400 Watt speaker assemblies with mounting bracket
- Sixty feet of speaker cable and a speaker pole mounting kit



Key Features

- Simple and compact hardware design
- Field-proven reliability
- Exceptional acoustic performance and intelligibility
- Unique, compact and highly-efficient Class D amplifier
- 1600 Watts of continuous audio output power (four 400 Watt speakers)
- 30 minutes of continuous activation
- Built-in tone generator providing for eight standard, pre-configured tones
- 127 pre-recorded voice messages, up to 30 minutes of recording time
- Local and remote testing and reporting including silent test feature
- Standard VHF and UHF radio receives and transmits FSK, DTMF and Two Tone Sequential (TTS) data signals
- Automatic gain control for consistent output volume
- Very low standby power requirements
- Temperature-compensated battery charger ensures batteries are at full capacity
- Very High MTBF (Mean Time Between Failures)
- Message encryption and security coding prevent unauthorized system activations
- Stainless steel enclosure with NEMA-4/3R electronic housing and NEMA-4/3R battery compartment
- Conformal-coated printed circuit boards for operating in harsh environments
- Meets UFC and FEMA requirements

Optional Features

ATI Systems offers fully customizable solutions, including the following features:

- Digital message board provides up to 127 pre-recorded messages, including 30 minutes of recording time
- Custom alert tones and digital messages specific to the application
- Advanced Communication Board upgrade to MP3/WAV digital voice messaging and Mini-SD flash memory card for easy message replacement, supports 255 messages and over 100 hours of recording time
- Local control panel upgrade with microphone, LCD display and controls, allows local activation and PA
- Trunked radio upgrade
- Flexible, redundant communication options including IP, Ethernet, twisted pair/phone line, cellular, satellite
- Antenna surge protector option
- Solar power option
- Strobe light and LED sign output options
- Choice of speaker type and configuration

Specifications for Model # HPSS16

General	
Operation	Tested and proven in harsh environments
Humidity	0 to 95%, non-condensing
Standby without AC	5 days (2 batteries with 100 AH (Amp-Hour) capacity)
Maximum Alarm Duration	30 minutes
Enclosure Weight	90 lbs (without batteries)
400W Speaker Weight (total of 4)	50 lbs each
Enclosure Size	28"H x 22"W x 14"D
Electrical	
AC Input Voltage	120 VAC or 240 VAC 50/60 Hz
Maximum Operating Current	3.5 Amps at 120 VAC or 2 Amps at 240 VAC
Communication	
Signaling Method	FSK, DTMF, TTS
Radio Output Power	1 to 25 Watts
Amplifier	
Audio Output Power	1600 watts RMS Continuous per Amplifier
Audio Bandwidth	250 Hz – 5 kHz
Class of Operation	Class D
Output Regulation	1 dB or better, no load to full load
Operating Voltage Range	21 to 32 VDC
Protection	Protected against primary over current, output over current or shorts and output voltage spikes
Controller	
Local Activation	Six pushbuttons for local testing
Radio Interface	Universal radio interface and power connectors
Expansion Ports	RS485, RS232 and a second 1600 Watt amplifier expansion port
Other Ports	Interface port for up to two Digital Message Boards
Other Features	Built-in AGC circuit, tone generator and digital adjustable audio gain
Standby Power without radio	< 200 milliamperes
Batteries	
Recommended Battery type: Two 100 AH batteries	

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High Powered Speaker Station

The HPSS32 is a powerful unit for maximum coverage. It provides 3200 Watts of continuous audio power for reliable outdoor alert tone notification and voice instructions in emergency situations. The ATI HPSS32 can also be utilized for live public address.

Standard Equipment

- Stainless steel enclosure with NEMA-4/3R electronic housing and NEMA-4/3R ventilated battery compartment
- Enclosure mounting bracket and mounting hardware
- Class D Amplifier integrated with a high-performance controller board and auxiliary amplifier board
- Conventional VHF or UHF radio and mounting hardware
- Intrusion switch
- Temperature-compensated battery charger
- Power On/Off circuit breakers
- Eight 400 Watt speaker assemblies with mounting bracket
- Eight speaker cables (60') and a speaker pole mounting kit



Key Features

- Simple and compact hardware design
- Field-proven reliability
- Exceptional acoustic performance and intelligibility
- Unique, compact and highly-efficient Class D amplifier
- 3200 Watts of continuous audio output power (Eight 400 Watt speakers)
- Built-in tone generator providing for eight standard, pre-configured tones
- 127 pre-recorded voice messages, up to 30 minutes of recording time
- Local and remote testing and reporting including silent test feature
- Standard VHF and UHF radio receives and transmits FSK, DTMF and Two Tone Sequential (TTS) data signals
- Automatic gain control for consistent output volume
- Very low standby power requirements
- Temperature-compensated battery charger ensures batteries are at full capacity
- Very High MTBF (Mean Time Between Failures)
- Message encryption and security coding prevent unauthorized system activations
- Stainless steel enclosure with NEMA-4/3R electronic housing and NEMA-4/3R battery compartment
- Conformal-coated printed circuit boards for operating in harsh environments
- Meets UFC and FEMA requirements

Optional Features

ATI Systems offers fully customizable solutions, including the following features:

- Digital message board provides up to 127 pre-recorded messages, including 30 minutes of recording time
- Custom alert tones and pre-recorded messages specific to the application
- Advanced Communication Board upgrade to MP3/WAV digital voice messaging and Mini-SD flash memory card for easy message replacement, supporting 255 messages and over 100 hours of recording time
- Local control panel upgrade with microphone, LCD display and controls, allows local activation and PA
- Trunked radio upgrade
- Flexible, redundant communication options including IP, Ethernet, twisted pair/phone line, cellular, satellite
- Antenna surge protector option
- Solar power option
- Strobe light and LED message sign output options
- Choice of speaker type and configuration

Specifications for Model # HPSS32

General	
Operation	Tested and proven in harsh environments
Humidity	0 to 95%, non-condensing
Standby without AC	5 days (4 batteries with 100 AH (Amp-Hour) capacity)
Enclosure Weight	127 lbs (without batteries)
400W Speaker Weight (total of 8)	400 lbs
Enclosure Size	44"H x 22"W x 14"D
Electrical	
AC Input Voltage	120 VAC or 240 VAC 50/60 Hz
Maximum Operating Current	3.5 Amps at 120 VAC or 2 Amps at 240 VAC
Communication	
Signaling Method	FSK, DTMF, TTS
Radio Output Power	1 to 25 Watts
Amplifier	
Audio Output Power	1600 Watts RMS Continuous per Amplifier (2)
Audio Bandwidth	250 Hz – 5 kHz
Class of Operation	Class D
Output Regulation	1 dB or better, no load to full load
Operating Voltage Range	21 to 32 VDC
Protection	Protected against primary over current, output over current or shorts and output Voltage spikes
Controller	
Local Activation	Six pushbuttons for local testing
Radio Interface	Universal radio interface and power connectors
Expansion Ports	RS485, RS232 and a second 1600 Watt amplifier expansion port
Other Ports	Interface port for up to two Digital Message Boards or Advanced Communication Board
Other Features	Built-in AGC circuit, tone generator and digital adjustable audio gain
Standby Power without radio	< 200 milliamperes
Batteries	
Recommended Battery type: Four 100 AH batteries	

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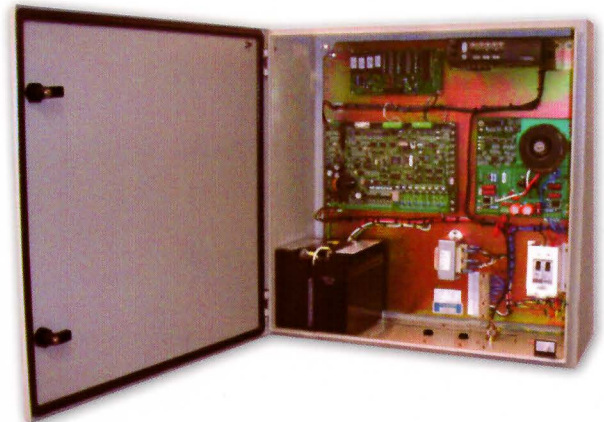
Indoor Systems and Solutions

Providing critical information or instructions to building occupants during any kind of situation is a vital part of your facility's public safety operations. ATI Systems offers several different solutions for Indoor Mass Notification Systems (MNS), also called Voice Evacuation Systems. The three solutions we offer include the Indoor Speaker Unit (ISU), the Indoor Voice System (IVS), and the PA Interface Unit (IPAS). The right system for your facility will depend on your needs, requirements, budget and any existing equipment.

Indoor MNS systems typically provide the bridge between facility-wide emergency warning notification alerts and indoor buildings, using a combination of low-power ceiling and/or wall speakers for hallways and rooms, medium-power horn speakers for larger areas, and strobes for visual alerting. In some applications there is an additional need for features such as local microphone PA capability, LED message signs, interfacing to a Fire Alarm Panel, or additional access panels for local PA and alert activation independent of the facility-wide system.

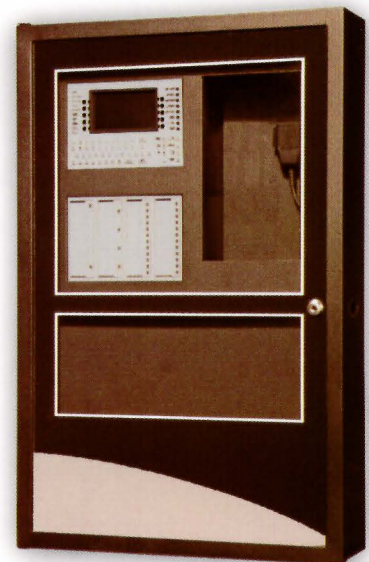
Indoor Speaker Unit (ISU)

For typical indoor capabilities, the powerful Indoor Speaker Unit (ISU) provides delivery of ATI Systems' outdoor Giant Voice audio over indoor building speakers with a 400W Class-D audio amplifier, and can also be configured to provide activation of visual alarm devices such as strobe lights and message signs. See the ISU datasheet for more information.



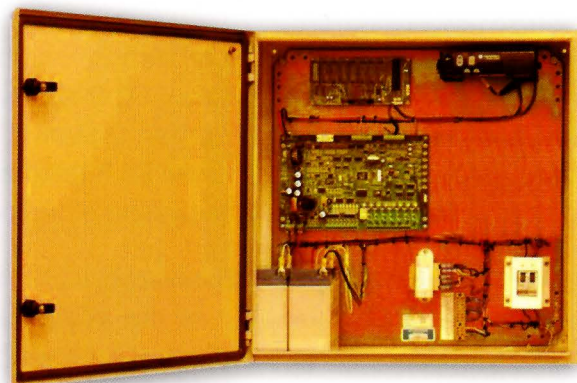
Indoor Voice System (IVS)

For demanding applications, the Indoor Voice System (IVS) provides a highly robust and scalable platform for feature-rich indoor-building mass notification and voice evacuation. The intelligent and networkable controller-based system serves as a central control location for activating and delivering pre-recorded messages, live voice PA, alert tones and visual alarm indications within a building, group of buildings or an entire facility by networking IVS systems together. The IVS can operate both independently and with outdoor Giant Voice Systems, to facilitate delivery of outdoor siren audio over the indoor building's speakers for a completely integrated solution. See the IVS datasheet for more information.

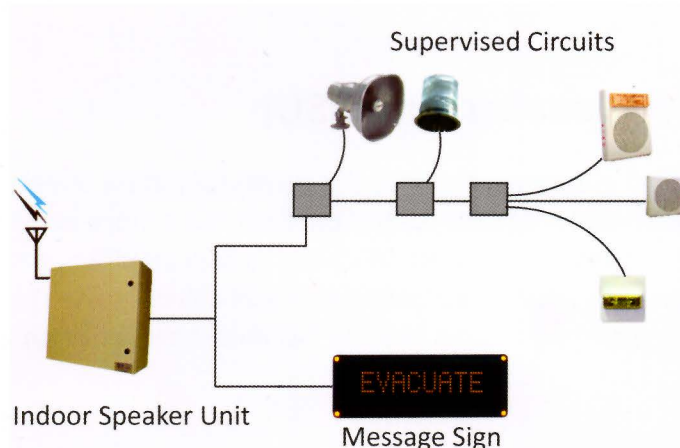
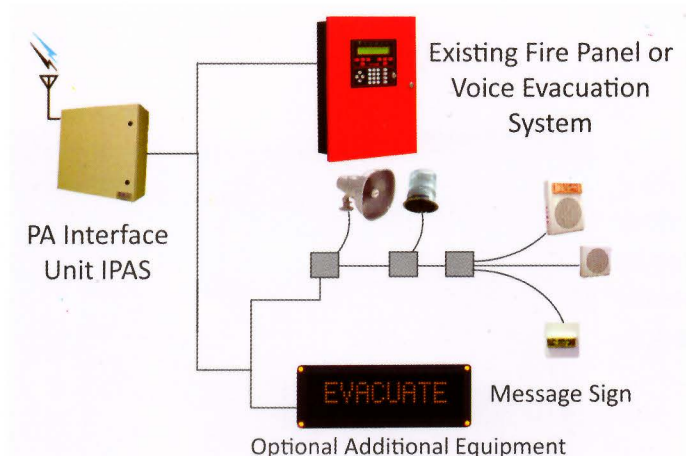


PA Interface Unit (IPAS)

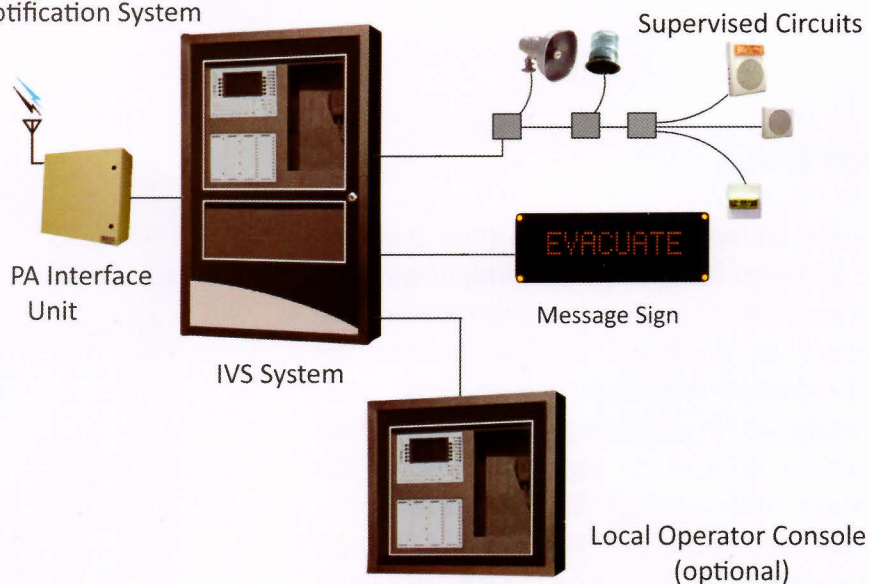
For extending facility-wide notification alerts from an outdoor ATI system into a building that has an existing Indoor PA, intercom, paging or voice evacuation system, the IPAS unit can interface to your existing equipment to deliver critical notification alert audio to your existing system's speakers and/or activate the existing visual alarms. The capabilities will depend on the interface capabilities of the existing system.



Typical Applications



Indoor Mass Notification System



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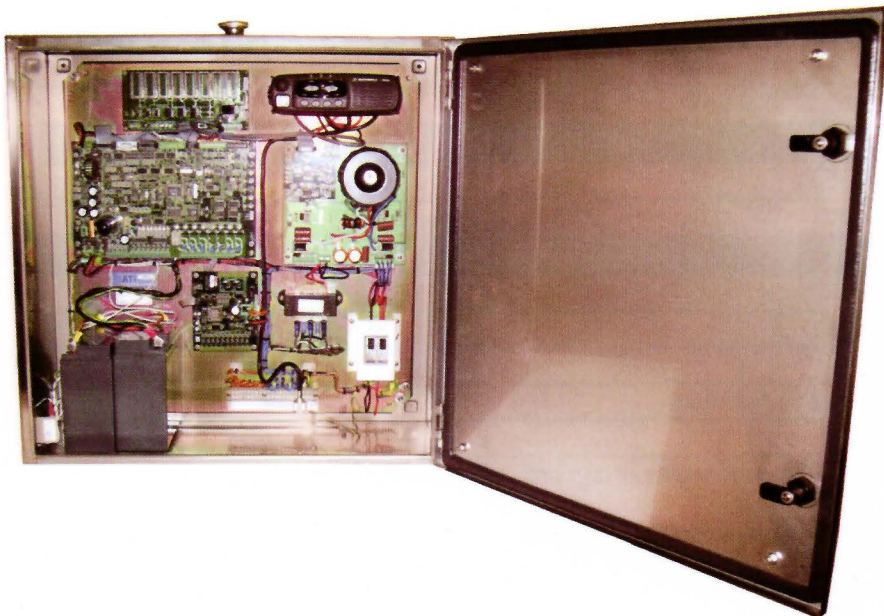
06/09

Outdoor Speaker Unit

The Outdoor Speaker Unit (OSU) is an integral part of the ATI system. The OSU provides 400 Watts of continuous audio output power for reliable outdoor alert tone notification, voice instruction and public address in emergency situations. The OSU is monitored, controlled and activated by the ATI Central Control Unit (CCU).

Standard Equipment

- NEMA-4/3R enclosure
- Remote Terminal Unit (RTU) controller board
- Temperature-compensated battery charger
- Power on/off circuit breakers and intrusion switch
- 400 Watt Class D Amplifier
- Conventional VHF or UHF radio and mounting hardware
- 25 volt and 70 volt audio output line for driving long speaker wire runs with minimum losses



Key Features

- Simple and compact hardware design
- Field-proven reliability
- Exceptional acoustic performance and intelligibility
- Unique, compact and highly-efficient Class D amplifier
- 400 Watts of continuous audio output power
- Supports 30 minutes of continuous activation
- Built-in tone generator providing for eight standard, pre-configured tones
- 127 pre-recorded voice messages, up to 30 minutes of recording time
- Local and remote testing and reporting with silent test option
- Standard VHF and UHF radio receives and transmits FSK, DTMF and Two Tone Sequential (TTS) data signals
- Automatic gain control for consistent output volume
- Very low standby power requirements
- Message encryption and security coding prevent unauthorized system activations
- Conformal-coated printed circuit boards for operating in harsh environments
- Temperature-compensated battery charger ensures batteries are at full capacity
- Meets UFC and FEMA requirements

Optional Features

ATI Systems offers fully customizable solutions, including the following features:

- Custom alert tones and digital messages
- Advanced Communication Board upgrade to MP3/WAV digital voice messaging and Mini-SD flash memory card for easy message replacement, supports 255 messages and over 100 hours of recording time
- Local control panel upgrade with microphone, LCD display and controls
- Trunked radio upgrade
- Flexible, redundant communication options including IP, Ethernet, twisted pair/phone line, cellular, satellite
- Antenna surge protector option
- Strobe light and LED sign output options
- Choice of speaker type and configuration
- NEMA-4/3R stainless steel enclosure upgrade

Specifications for Model # OSU

General	
Operation	Tested and proven in harsh environments
Humidity	0 to 95%, non-condensing
Standby without AC	3 days
Maximum Alarm Duration	30 minutes
Enclosure Size	23"H x 23"W x 10"D
Electrical	
AC Input Voltage	120 VAC or 240 VAC 50/60 Hz
Maximum Operating Current	3.5 Amps at 120 VAC or 2 Amps at 240 VAC
Communication	
Signaling Method	FSK, DTMF, TTS
Radio Output Power	1 to 25 Watts
Amplifier	
Audio Output Power	400 Watts RMS
Audio Bandwidth	250 Hz – 5 kHz
Class of Operation	Class D
Output Regulation	< 1 dB, no load to full load
Operating Voltage Range	21 to 32 VDC
Protection	Protected against primary over current, output over current or shorts and output voltage spikes
Controller	
Radio Interface	Universal radio interface and power connectors
Expansion Ports	RS485, RS232
Other Ports	Interface port for up to two Digital Message Boards
Other Features	Built-in AGC circuit, tone generator and digital adjustable audio gain
Standby Power without Radio	< 200 milliamperes
Batteries	
Requires two 12VDC, 17 Amp-Hour batteries	

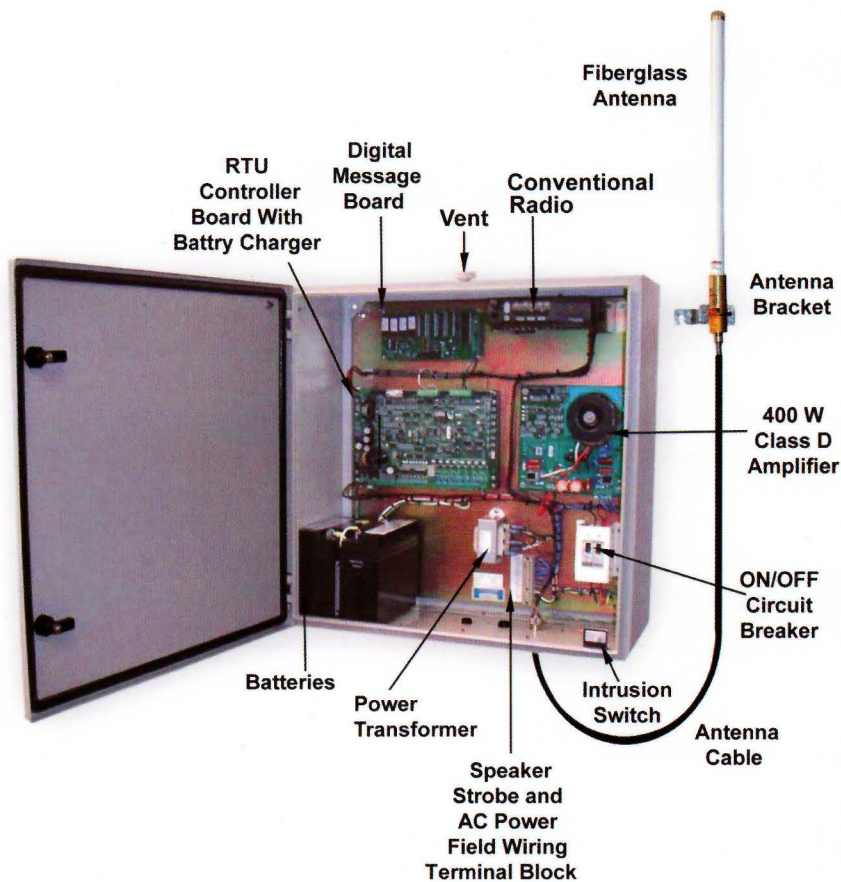
All information and specifications are subject to change without notice, and may contain typographical or other errors.

Indoor Speaker Unit

The Indoor Speaker Unit (ISU) is an integral part of the ATI system. The ISU provides 400 Watts of continuous audio output power for reliable indoor alert tone notification, voice instruction and public address in emergency situations. The ISU is monitored, controlled and activated by the ATI Central Control Unit (CCU).

Standard Equipment

- NEMA-4/3R enclosure
- Remote Terminal Unit (RTU) controller board
- Temperature-compensated battery charger
- Power on/off circuit breakers and intrusion switch
- 400 Watt Class D Amplifier
- Conventional VHF or UHF radio and mounting hardware
- 25 volt and 70 volt audio output line for driving long speaker wire runs with minimum losses



Key Features

- Simple and compact hardware design
- Field-proven reliability
- Exceptional acoustic performance and intelligibility
- Unique, compact and highly-efficient Class D amplifier
- 400 Watts of continuous audio output power
- Supports 30 minutes of continuous activation
- Built-in tone generator providing for eight standard, pre-configured tones
- 127 pre-recorded voice messages, up to 30 minutes of recording time
- Local and remote testing and reporting with silent test option
- Standard VHF and UHF radio receives and transmits FSK, DTMF and Two Tone Sequential (TTS) data signals
- Automatic gain control for consistent output volume
- Very low standby power requirements
- Message encryption and security coding prevent unauthorized system activations
- Conformal-coated printed circuit boards for operating in harsh environments
- Temperature-compensated battery charger ensures batteries are at full capacity
- Meets UFC and FEMA requirements

Optional Features

ATI Systems offers fully customizable solutions, including the following features:

- Custom alert tones and digital messages
- Advanced Communication Board upgrade to MP3/WAV digital voice messaging and Mini-SD flash memory card for easy message replacement, supports 255 messages and over 100 hours of recording time
- Local control panel upgrade with microphone, LCD display and controls
- Trunked radio upgrade
- Flexible, redundant communication options including IP, Ethernet, twisted pair/phone line, cellular, satellite
- Antenna surge protector option
- Strobe light and LED sign output options
- Choice of speaker type and configuration
- NEMA-4/3R stainless steel enclosure upgrade

Specifications for Model # ISU

General	
Operation	Tested and proven in harsh environments
Humidity	0 to 95%, non-condensing
Standby without AC	3 days
Maximum Alarm Duration	30 minutes
Enclosure Weight	96 lbs (without batteries)
Enclosure Size	23"H x 23"W x 10"D
Electrical	
AC Input Voltage	120 VAC or 240 VAC 50/60 Hz
Maximum Operating Current	3.5 Amps at 120 VAC or 2 Amps at 240 VAC
Communication	
Signaling Method	FSK, DTMF, TTS
Radio Output Power	1 to 25 Watts
Amplifier	
Audio Output Power	400 Watts RMS
Audio Bandwidth	250 Hz – 5 kHz
Class of Operation	Class D
Output Regulation	< 1 dB, no load to full load
Operating Voltage Range	21 to 32 VDC
Protection	Protected against primary over current, output over current or shorts and output voltage spikes
Controller	
Local Testing	Six pushbuttons for local testing
Radio Interface	Universal radio interface and power connectors
Expansion Ports	RS485, RS232
Other Ports	Interface port for up to two Digital Message Boards
Other Features	Built-in AGC circuit, tone generator and digital adjustable audio gain
Standby Power without Radio	< 200 milliamperes
Batteries	
Requires two 12VDC, 17 Amp-Hour batteries	

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Remote Terminal Unit

The versatile Remote Terminal Unit can interface a wide variety of inputs and outputs to the ATI control system. Input from devices such as wired or wireless push buttons, sensors and fire panels can be configured to trigger system activations. The RTU outputs can control a variety of external units during an activation. Examples include traffic light control, strobe lights, gate control units, radio repeaters and message signs. The RTU can also put out an audio signal to provide alert messages or live voice to external PA systems or radios.

Standard Equipment

The RTU includes a NEMA-4/3R enclosure cabinet; an RTU Controller Board equipped with eight 10 Amp/250VAC relay outputs, eight optically isolated inputs, four configurable analog data inputs, a tone generator and local push buttons for testing; a conventional VHF or UHF radio and mounting hardware; a temperature-compensated battery charger; an intrusion switch; and power On/Off circuit breakers.

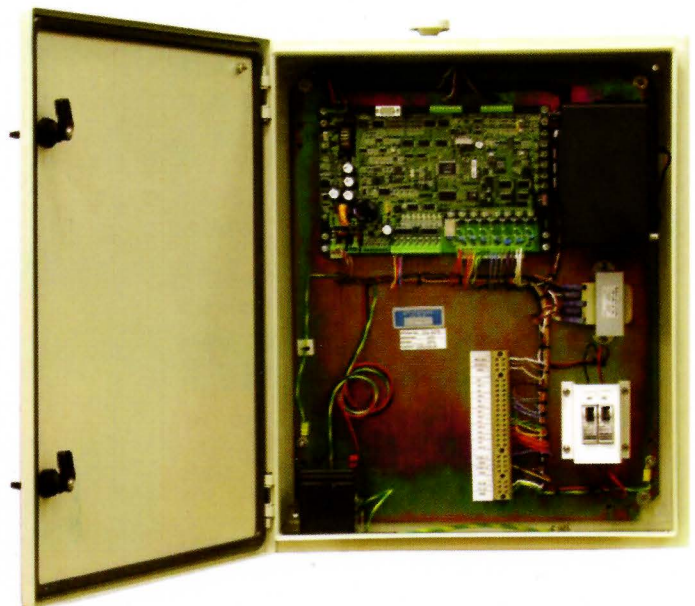
Optional Features

ATI Systems offers fully customizable solutions, including the following features:

- Trunked radio upgrade
- Additional radio for radio re-broadcast
- Hardwired push button, public address or strobe monitoring board
- Wireless push button receiver
- Flexible, redundant communication options including IP Ethernet, twisted pair/phone line, cellular, satellite
- Local control panel upgrade with microphone, LCD display and controls
- Antenna surge protector option
- Solar power option
- Strobe light or LED sign output options
- NEMA-4/3R stainless steel enclosure upgrade

Key Features

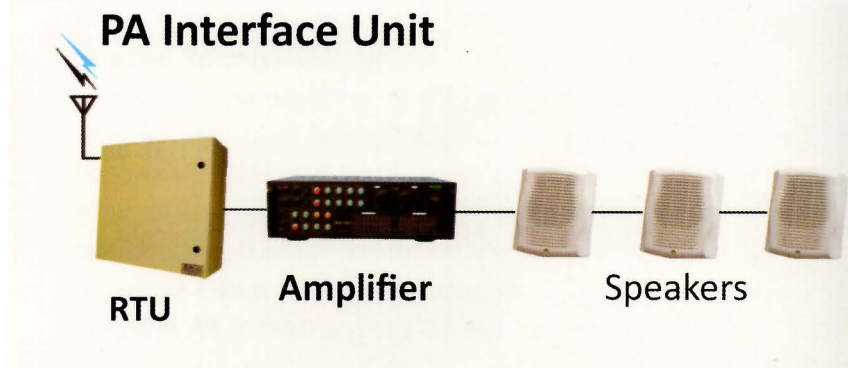
- Simple and compact hardware design
- Field-proven reliability
- Remote activation, testing and reporting
- Local and remote silent testing
- Standard VHF and UHF radio receives and transmits FSK data signals
- Very low standby power requirements
- Message encryption and security coding prevent unauthorized system activations
- Conformal-coated printed circuit boards for operating in harsh environments
- Temperature-compensated battery charger ensures batteries are at full capacity



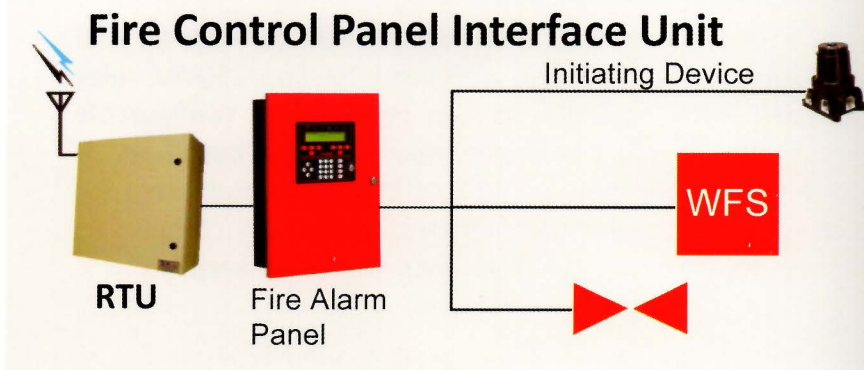
Multiple Configuration Available

The flexible and versatile RTU is configurable for many standard interfacing and control applications, including:

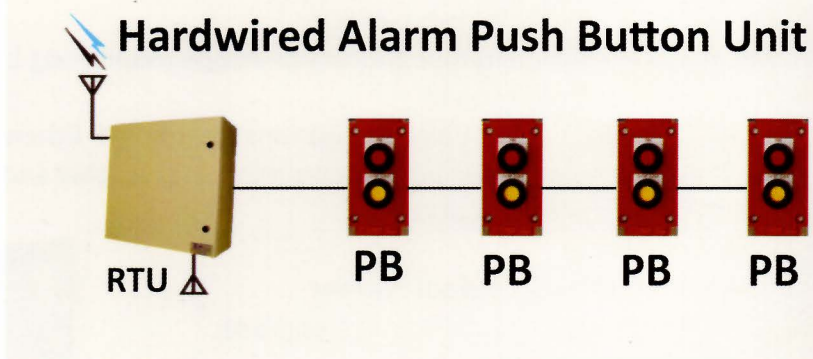
1. PA Interface Unit: A balanced 600 ohms /line level adjustable audio output provides an interface to existing public address and voice evacuation systems. The PA Interface Unit allows for remote activations of alert tones, pre-recorded and live voice messages, delivered over an existing audio system



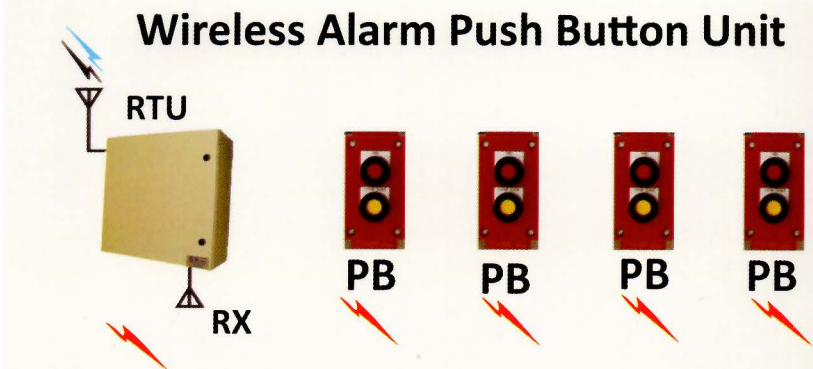
2. Fire Control Panel Interface Unit: The RTU can also interface to a fire control panel and transmit status information to the ATI system, which in turn can broadcast alert tones, pre-recorded and live voice messages through the fire control panel speakers.



3. Hardwired Alarm Push Button Unit: The Push Button Board supervises and monitors up to 10 directly connected remote push buttons (expandable in groups of 10). The system is configurable to play either a systemwide alert tone and message, or area-specific alert tones and messages when a push button is pressed at a remote location. The push buttons can be color-coded to indicate different activations.

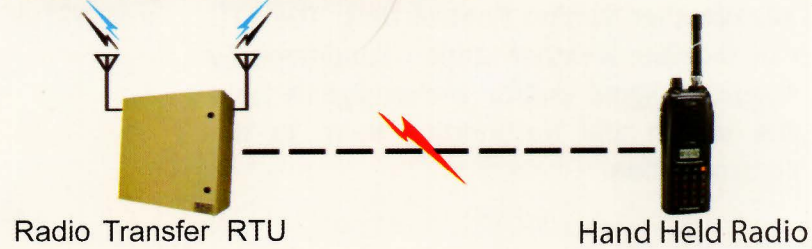


4. Wireless Alarm Push Button Unit: Similar to the hardwired option, the wireless push button receiver supervises and monitors up to 16 wireless push buttons using 900 MHz spread spectrum technology. The system is configurable and the push buttons can be color-coded as described above.



5. Radio Re-Broadcast Unit: The Radio Re-Broadcast Unit allows the re-broadcast of emergency alert tones and messages on a second radio frequency. It is mainly used to broadcast the notifications on hand-held radios.

Radio Re-Broadcast Unit



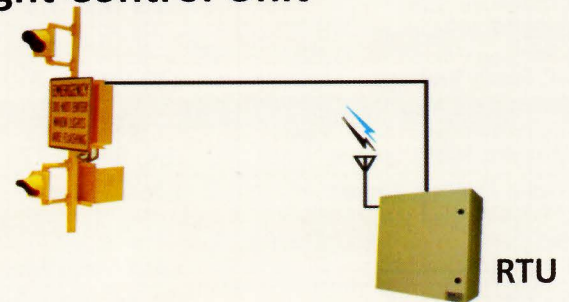
6. Gate Control Unit: The Gate Control Unit is programmed to supervise and control remote access gates. It is useful for both preventing and reporting unauthorized access to a secure area, as well as for opening and closing gates during emergencies.

Gate Control Unit



7. Traffic Light Control Unit: Programmed to control and operate a traffic light in response to specific emergencies, the RTU is best used to prevent traffic from entering a hazardous area.

Traffic Light Control Unit



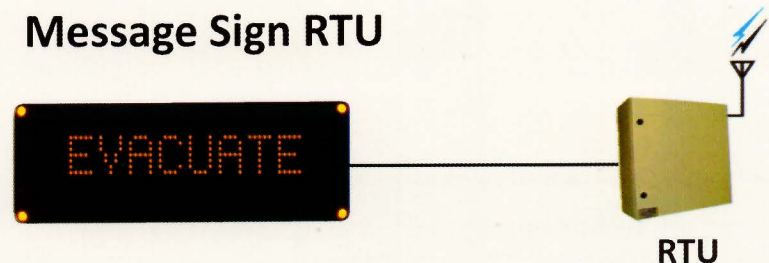
8. Strobe Light Control Unit: This option allows the RTU to control and monitor strobe lights. Note: Requires two 12V batteries.

Strobe Light Control Unit



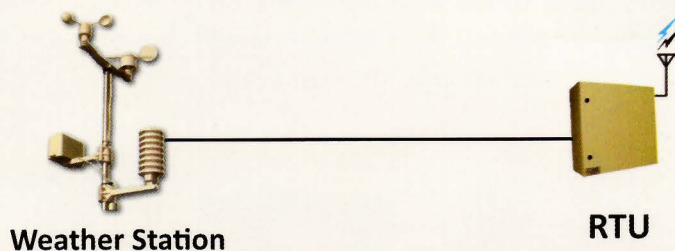
9. Message Sign Control Unit: The RTU can be configured to control and monitor indoor and outdoor alpha-numeric signs. The signs can be activated and changed remotely.

Message Sign RTU



10. Weather Station Control Unit: The RTU can monitor weather station conditions by receiving digital and/or analog signals from the station and transmitting them to the control station.

Weather Station Control Unit



Specifications for Model # RTU

General	
Operation	Tested and proven in harsh environments
Humidity	0 to 95%, non-condensing
Standby without AC	20 Hours
Enclosure Weight	96 lbs (without batteries)
Enclosure Size	23.5"H x 23.5"W x 10"D
Electrical	
AC Input Voltage	120 VAC or 240 VAC 50/60 Hz
Communication	
Modem Modulation	FSK, DTMF, TTS
Radio Output Power	1 to 25 Watts
Controller	
Program Storage	256K Flash Memory/100 years of data retention
Addressing	Dip switches for easy address selection
Local Activation	Six pushbuttons for local testing
Radio Interface	Universal radio interface and power connectors
Expansion Ports	RS485, RS232
Other Ports	Interface port for up to two Digital Message Boards
Other Features	Built-in AGC circuit, tone generator and digital adjustable audio gain
Active Power without radio	< 200 milliamperes
Batteries	
Requires one 12VDC, 12 Amp-Hour battery	

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Network Alerting Solutions

Network Alerting features allow ATI's emergency warning systems to provide alert notification and information via email, telephone, pager, computer pop-up, SMS/text, and also through Web/RSS portals. These capabilities extend your warning system's ability to deliver critical information to additional people that are either off-premise or otherwise may not get the standard notification. A multi-layered warning system provides a redundant means of notification to ensure that as many people as possible are being warned of the danger.

Through a powerful combination of built-in features and integration with a wide variety of 3rd party network alerting partners, ATI can provide a solution to meet virtually any network-alerting requirement. The ATI system can integrate using a variety of communication methods including RS232, RS485, Ethernet, web posting with XML, contact closure, DTMF, and more.

Multi-layered Notification

Email

Sends a message to a specified list of individual and/or group email recipients.

Telephone, Pager, Fax

The Telephone Alert System (TAS) is designed to notify a specific list of people via telephone calling. The system is used to dial out to home phones, work phones, and cellular phones. It can also be used to send notification via fax or to alphanumeric pagers. It is also capable of generating calls based on geo-spatial information generated from GIS maps.

SMS/Text

Sends a text message to a specified list of mobile phone and PDA recipients.

Web/RSS Portal

Updates and displays special information due to an alert activation, on either specific web pages and/or RSS clients that are subscribed for those alerts.

Computer Popup

Sends messages to workstations and computers on the local network and optionally over the internet depending upon the configuration. The messages can be a combination of audio-visual messages and text messages. This feature normally requires that a special client application be installed on the computers that are to receive the notification.

Electronic Message Sign and Flat-Panel Monitor

Display special information due to an alert activation, on LED-type message signs and/or on Flat panel display monitors.

System Setup

Network Alerting Server

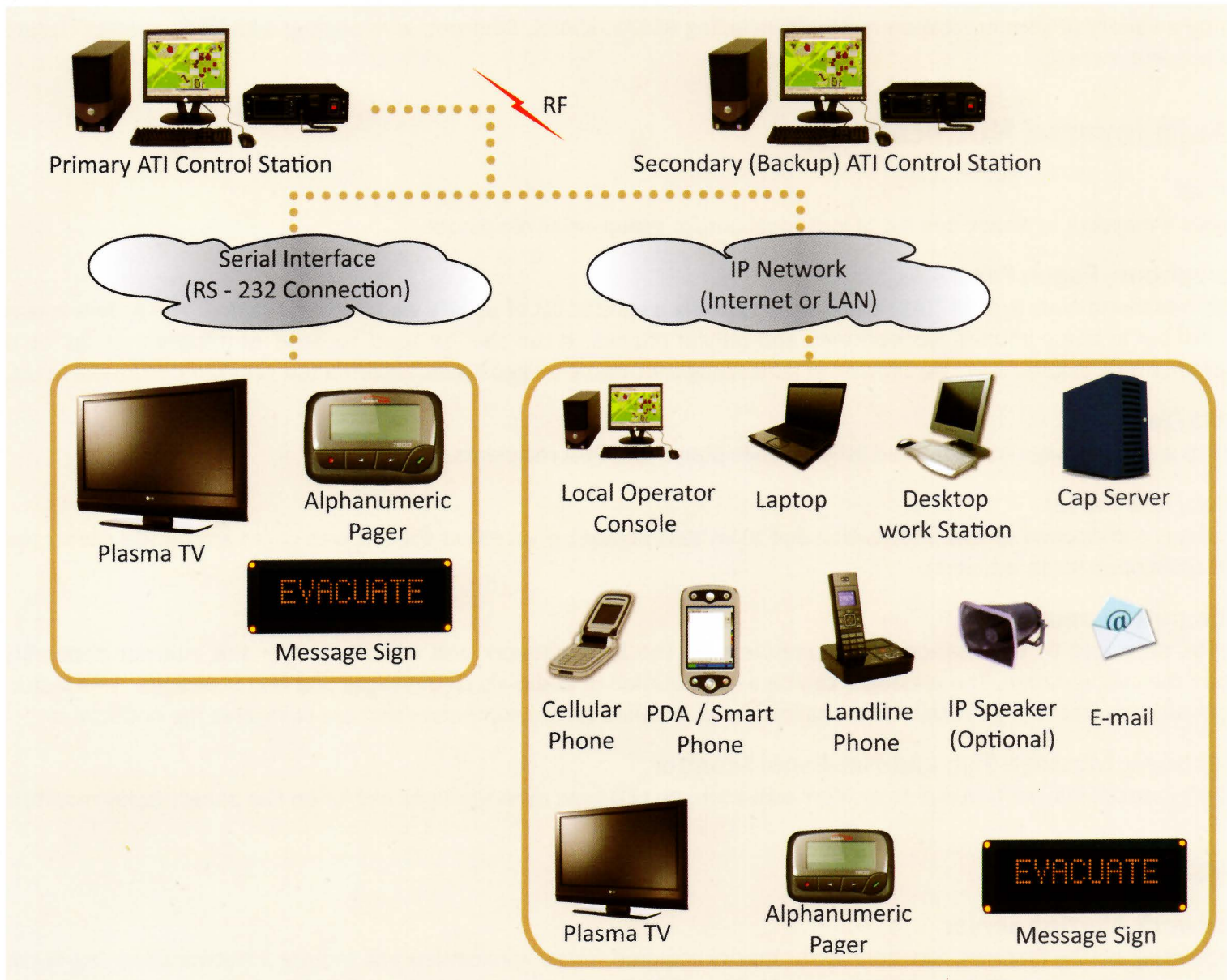
Depending on the features, functions and capacity required, some applications will require a Network Alerting Server (NAS) in addition to ATI's standard Control Station. The NAS Server communicates with the ATI control station using IP communication, to receive alert activations and send status information. The NAS server normally controls and maintains the database required to operate the Network Alerting functions, and is responsible for executing the network-based alerts. The NAS Server may be located on the local network, and in some cases the NAS server may be an externally-hosted server that communicates with the ATI Control Station over the internet. ATI can provide NAS Servers that are CAP (Common Alerting Protocol) compliant for homeland security applications, and also that are DIACAP-certified for military applications.

Opt-In Application

For systems that are designed to serve large numbers of users, an Opt-In service can be provided so that users can access a web site to enter their information and subscribe to the system's available network alerting services.

One-Button Approach

For ease-of-use when a system operator needs to initiate a system-wide activation, ATI can provide a one-button solution for initiating alerts on all systems simultaneously.



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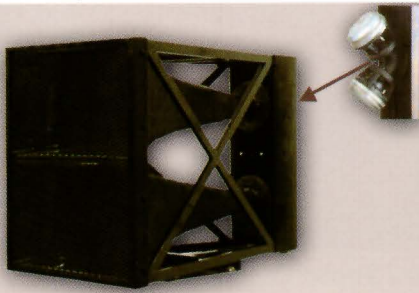
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Available Speakers & Strobe Lights

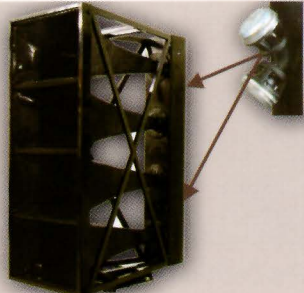
Speakers

High Powered Outdoor Speakers

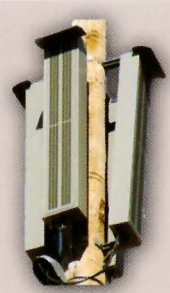
- Low-impedance speakers with different power output options and configurations (100 Watt, 200 Watt and 400 Watt options) for outdoor use



1600 Watt
Directional Speaker



3200 Watt
Directional Speaker



Planar Speakers Power Range
Recommendations 20 - 400 Watts



200 or 400 Watt Round
Directional Re-entrant Speaker



400 Watt Square Directional
Re-entrant Speaker

Speakers and Horns for Indoor Applications

- 25/70 volt low power speakers and horns for indoor and outdoor applications, ceiling and wall mount, strobe combinations available.

Indoor Horns



15 Watt Horn



30 Watt Horn



30 Watt Explosion-Proof
Speakers



100 Watt Directional
Re-entrant Speaker

Ceiling or Wall Mounted Speakers



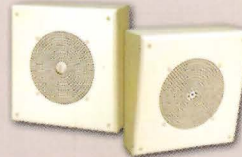
Power Setting:
1/4, 1/2, 1, 2 watts *



Power Setting: 1/4,
1/2, 1, 2, 4 watts



Drop-in ceiling speaker
Power Setting: 1/4, 1/2,
1, 2, 4 watts



Amplified
1 Watt Speaker



Power Setting:
1/4, 1/2, 1, 2 watts*



Power Setting: 1/4,
1/2, 1, 2, 4 watts

Strobes

- Available in 24 Volt for indoor and outdoor applications
- Choice of colors includes Red, Amber, Clear and Blue
- Explosion-Proof Strobe Lights

Indoor Combination Speaker/Strobe



Ceiling Unit Speaker / Strobe Combination
Power Setting: ¼, ½, 1, 2 watts *



Wall Unit Speaker / Strobe Combination
Power Setting: ¼, ½, 1, 2 watts *

Indoor Ceiling or Wall Mounted Strobes without a Speaker



Indoor Wall Strobe



Indoor Ceiling Strobe

Strobes for Indoor and Outdoor Applications



Explosion Proof LED Light



Strobe Light



Strobe Light
with Exterior Dome



Strobe Light
Polycarbonate Housing



Explosion Proof Strobe
Group B Designation



Hazardous
Area Strobe Light



Strobe Division
2 Hazardous Location



Explosion Proof Strobe

* For use with Indoor Voice Evacuation Systems requiring Class A or B supervised circuits. UL 1408 Listed for fire protective signaling.

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Tone Alert Radio

The ATI Tone Alert Radio (TAR) is ideal for indoor emergency alerting in remote, enclosed spaces. It can be used as a standalone unit or as part of a complete ATI warning and notification system.

Standard Equipment

- Radio receiver
- Telescopic antenna
- UL wall transformer
- Battery and mounting bracket

Standard Applications

- **MILITARY** - The TAR is a cost-effective solution for notifying the residents in base housing of any man-made or natural emergency situation.
- **CAMPUS / COMMUNITY** - The TAR can be used for indoor alerting throughout remote buildings.
- **INDUSTRIAL** - For small, isolated buildings within an industrial facility the radio can be used for emergency notification.

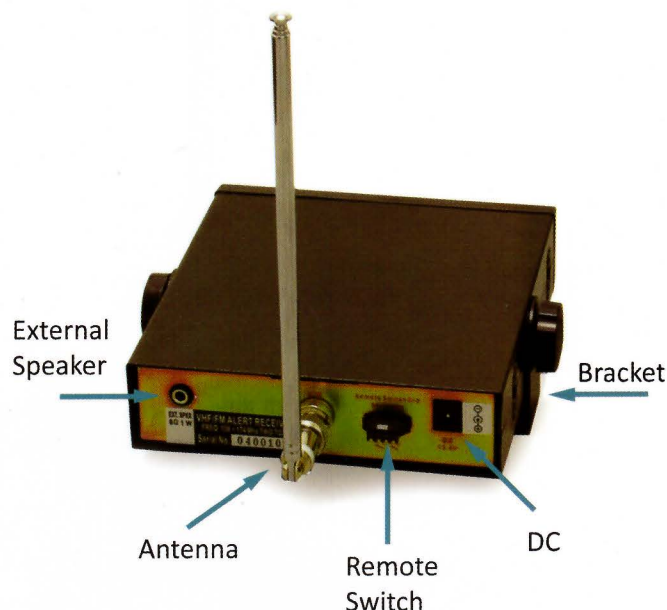
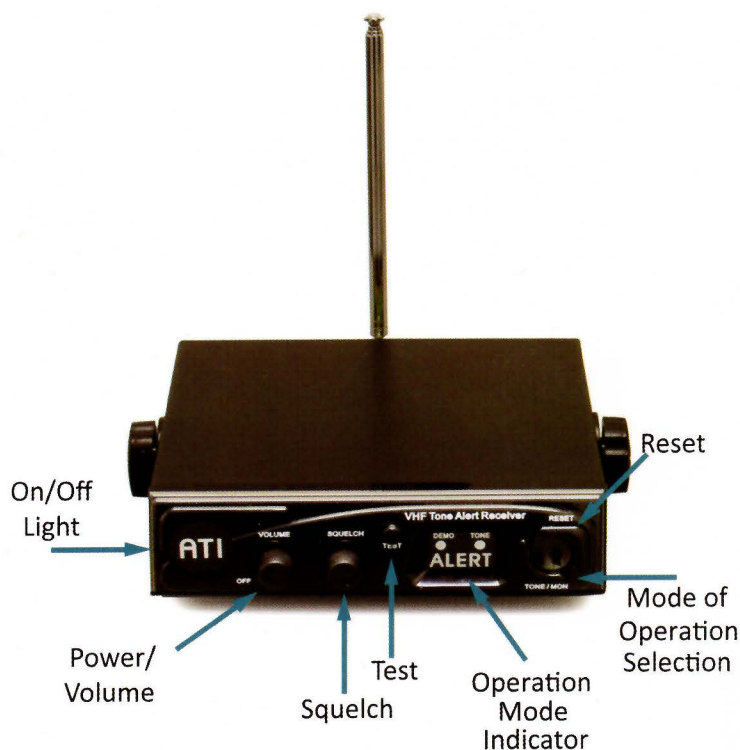
Key Features

- Broadcast live voice and pre-recorded messages from a single channel frequency
- Decodes single tone, dual tone, SAME and FSK data signals
- Able to interface with existing communication signaling
- Can be controlled with the ATI Communication Control Unit
- Includes an internal speaker and external Speaker Jack (8 ohms, 1W)
- Rechargeable battery with built-in charger
- Includes a service mount bracket to attach to a wall
- Provides 2 dry relay contacts SPST for external signaling equipment (example: strobe light)
- Volume Control
- Programming port to easily set control configuration parameters



Specifications for Model # TAR

Electrical	
AC Input Voltage	120 VAC or 240 VAC 50/60 Hz using a UL wall transformer with rechargeable battery backup
Communication	
Receives VHF 136-174 MHz and UHF 436-474 MHz frequencies	
Antenna Impedance	50 ohms
BNC Antenna Connection	
Mechanical	
Size	2"H x 5.25"W x 6.75"D
Antenna Height	18"
Weight	2 lbs
Operation	Tested and proven in harsh environments
Controls and Indicators	
Volume Control	Included
Power Indicator	Included
Squelch Control	Included



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A dark blue curved graphic element in the bottom left corner of the page, featuring several concentric, lighter blue arcs that sweep upwards and to the right.

Mission

Acoustic Technology's objective is to provide our customers and prospective clients with the most technically superior Mass Notification "MNS" solutions available on the market, while assuring the highest possible performance and system integrity for the best financial value.



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